Personality as a Moderator of Cognitive Stimulation in Older Adults at High Risk for Cognitive Decline

Nikki Hill, The Pennsylvania State University; Ann Kolanowski, The Pennsylvania State University; Donna Fick, The Pennsylvania State University; Vernon Chinchilli, The Pennsylvania State University; Rita Jablonski, University of Alabama Birmingham School of Nursing

Background/Purpose: Individuals with dementia and delirium may experience an accelerated period of cognitive decline which is often unresolved, leading to long-term negative consequences. Interventions targeting acute cognitive decline in this population are largely unexplored, and moderators of intervention effectiveness have yet to be determined. The purpose of this study was to determine whether personality moderated cognition-focused intervention outcomes in individuals at high risk for cognitive decline: those with dementia and delirium.

Theoretical Framework: This study was guided by the theory of cognitive reserve which posits that cognitive function is not solely based on the degree of neurodegenerative disease, but is dependent upon the varying capacities of individuals to withstand brain injury before the manifestation of clinical symptoms of cognitive decline.

Methods: This study utilized a portion (n=71) of the sample participating in a randomized repeated measures clinical trial. Subjects with dementia and concurrent delirium were recruited upon admission to one of seven nursing homes with post-acute services for rehabilitation following hospitalization. The control group received routine nursing care and prescribed therapies. In addition to usual care, the treatment group received 30 minutes of cognitive stimulation daily for up to 30 days. Baseline measures included demographic characteristics, APoE status, Lifetime of Experiences Questionnaire, the Modified Blessed Dementia Rating Scale, and the NEO Personality Inventory-3. Measures of delirium, attention, orientation, memory, and executive function were taken daily for both groups, as well as engagement in the intervention for the treatment group. Linear mixed-effects models were used to examine the moderating effects of the five personality traits on the four cognitive outcomes, as well as main effects on engagement outcomes among the treatment group.

Results: Significant moderating effects of personality traits were found with regard to two cognitive outcomes: agreeableness moderated the memory outcome and extraversion moderated the executive function outcome. Individuals with higher agreeableness were more likely to have improved memory outcomes, and those with lower extraversion were more likely to have improved executive function outcomes, as a result of the cognition-focused intervention. Lower openness, higher agreeableness, and lower conscientiousness were associated with greater engagement in the intervention.

Conclusions and Implications: Personality traits are known to influence a wide variety of health and treatment outcomes, and their role in cognition-focused interventions for individuals with dementia and delirium is in line with these findings. The consideration of personality in further development and testing of these interventions will provide clarification and characterization of these effects.

Learning Objectives: At the conclusion of this presentation the participants will be able to:

- Describe several factors which may influence intervention outcomes among individuals with delirium superimposed on dementia.
- Describe the moderating effects of personality traits on the outcomes of a cognitive stimulation intervention for individuals with delirium superimposed on dementia.